

Engineering Notes for Missouri Thin TS

12/14/11

A. Haul route roads:

The haul routes for this sale are on National Forest System (NFS) roads 3412, 3310, 3310120, 3415, and 3415117 starting from the sale units and going to Highway 34. Log haul has been appraised to Philomath, Oregon. All roads are listed as non-key roads under the Siuslaw travel management and roads analysis.

Road reconstruction of NFS roads is required with the sale contract. Road 3412 has asphalt surfacing from Hwy 34 to mile post 2.5. The remainder of road 3412 is aggregate. All other NFS roads listed are aggregate surface.

Maintenance on this sale is purchaser responsibility. The asphalt segment of the 3412 road will be purchaser maintenance responsibilities for all maintenance except for blading. A maintenance deposit will be collected for haul over the asphalt segment. Spot rock for all non-key aggregate system roads is included and appraised for.

NFS road 3412 and 3310 would be shared haul roads with Jeep Thin timbers sale, currently under contract. Road 3412 would be a shared haul road with Bear Thin and Jeep Thin.

B. System and temporary roads –season of haul, road protection and truck assist.

See logging feasibility report (LFR) for details.

In general, all system and temporary roads identified for year round use are appraised for rock re-surfacing or spot rocking. Temporary roads appraised for full length rock lift to extend haul season are Unit 2 landing A, Unit 3 landings F and G, Unit 6 landing A, Unit 10 landing Q, and Unit 12 landings B and C. Purchaser option to rock for extended season is identified below. Coordinate extended haul season with district resource specialists.

Equipment on landings along roads 3412, 3415 and 3310 will block the road at several landings. Public traffic can expect temporary delays. Consider roads as project roads; “KO” not necessary on sale map. Alternate public routes are available if necessary.

Truck assist is appraised for temporary roads in Unit 6 (landings B & C) and Unit 13 (landings A, B and C).

Dust abatement (water) is appraised on road 3415 from Hwy 34 to beginning of Alsea Bridge, approximately 400 feet. This is a courtesy to the adjacent private landowner who has requested dust relief from log haul during dry seasons. Estimated application is three times weekly for approximately six weeks / per season. Designated water chance sight on National Forest lands is approximately 1 mile (one way) on road 3420, mile post 0.3. Costs are appraised under section F below. Sale map should designate water site per K-F.3.1#.

The dry season haul temporary non-system roads in unit 6, 10 and 11 have been appraised for 10 cubic yards each at their approach to system roads 3412 and 3415 in order to reduce soil contamination with the system road planned for haul during the wet season.

Temporary roads not appraised for all season but are purchaser option for rocking to extend haul season includes unit 3 landings B, C and D; unit 6 landings F, J and K .

System roads 3415, 3310, 3310120 and 3415117 have been appraised for placement of rock in water bars; costs are displayed in the Spot Rock worksheet.

Gate installation is planned for system road 3310 under a separate contract. If gate is in place during sale operations, consider road as closed to the public. If gate is not in place, consider road open to public unless closed during logging operations. Type II waterbar installation (drivable) on road 3310 required with post haul maintenance is the result of an agreement with Consumers Powers Inc who require ongoing access to maintain powerlines.

C. Unit Notes:

Unit 1: All landings are along road 3415 and have been appraised for landing rock.

Unit 2 – Landing A sits on a temporary road, just off the 3415 road. Removal and replacement of existing earthen barricade on the temporary road is appraised for with landing and temp road costs. All other landings are along rd 3415. All landings are appraised for landing rock.

Unit 3 – Temporary road to landing “C” has approximately 80 cy of waste material in the road prism and off the road shoulder near the landing. Appraisal allowance applied for leveling or ramping over fill. Loaded trucks from landings B, C, D, G and F are appraised to turn at the 3415117 junction to haul north on 3415. The temporary road junctions at 3415 for these landings are angled to haul south only. Temporary road to landings G and F is appraised for full length rock lift to extend haul season. Temporary road to landing F has approximately 20 cy of waste material in the road prism; ramping or leveling is included in the temp road opening cost. Landing I - trucks can turn empty at junction of temporary road to landing A, unit 6, and back approximately 60 feet to landing I.

Units 4&5: All landings are along rd 3415 and have been appraised for landing rock. Minor amounts of waste material to level in landing locations. Leveling is appraised for in landing costs.

Unit 6 – Landing A is along a temporary spur road with the junction angled to haul east only on the 3415117. No turn around sites were located on FS land along the 117; have appraised for trucks to back loaded approximately 1200 feet on 3415117 to the 3415 junction, for haul north on road 3415. This same temporary road is appraised for a full length rock lift to extend haul season. Temporary road to landings B and C needs an approach ramp constructed where it junctions with system roads 3415 and 3415117. End haul may be necessary to construct approach ramp and is included under temporary road costs. Or, ramp material could come from lowering road grade up road bringing material from upridge down to construct the ramp. The approach ramp is appraised for 60 cy of traction rock. This same temporary road has an estimated 80 feet of over 25% favorable haul grades that should be designed to lower grade to meet OSHA standards. This can be accomplished with road relocation for approximately 80 feet. Even with re-location this road is appraised for truck assist for landings B and C, since favorable haul grades are estimated to be between 20-25%. This same temporary road has an estimated 130 feet of full bench design. Excess material at bench location can be used for approach ramp or could be wasted below the full bench location (on an older road prism not planned for use). Two hours of end haul is appraised for bench construction. Landing construction costs of D and E includes construction of truck turn arounds near these tight landing locations. The temporary road junction with 3415 to landings D and E is angled for haul south only.

Unit 7: All landings are along rd 3415 and have been appraised for landing rock.

Unit 8: All landings are along roads 3415 and 3412 and have been appraised for landing rock.

Unit 9: All landings are along an existing temporary road.

Unit 10: Temporary road to landing Q has been appraised for a full length rock lift to extend the haul season. The last 300 feet of the temporary road to landing B was flagged twice. The blue flag line was the original line; the pink flag line was flagged in at less than 15% adverse grades. No truck assist was appraised.

Unit 11: The temporary road to landings A-E has two dry swale crossings with no drain pipe. Traction rock has been appraised at each location (10 cy each). This same road has favorable haul grades near 19%; no truck assist was appraised. Landing F is a wide spot along a 400 foot rocked segment of the otherwise asphalt paved road segment of NFS road 3412. This is a ground based landing. Specified road construction requires this aggregate segment be paved. Restrict timing of asphalt paving in the timber sale contract to occur after landing F is skidded and hauled.

Unit 12: The temporary roads to landings B and C have been appraised for a full length rock lift to extend the haul season.

Unit 13: The temporary road to landings A and B has favorable haul grades between 20-25%. Truck assist is appraised.

C. Pre and post sale operational status for the system roads:

Road #	Presale status	Post sale planned status	Waterbars/berms
3412000	Non key road, open	Non key, open	None / None
3215000	Non key road, open	Non key, open	Type two, None
3310000*	Non key road, open	Non key, open	Type two, None
3310120	Non key road, open	Non key road, closed	Type one, berm
3415117	Non key road, open	Non key road, open	Type two, None

* See note under section B above; road may be gated closed before, during or after sale is awarded.

D. Log Haul Operating season and Haul routes.

Unit Number	Planned Haul Route	Engineering Log Haul Operating season *
1	3415 to Hwys 34 & 20 to Philomath	All season
2	3415 to Hwys 34 & 20 to Philomath	All season
3	3415117 to 3415 to Hwys 34 & 20 to Philomath	All season system roads and temporary road to landings F and G; dry season all other temporary roads
4	3215 to Co Rd 807 to Hwys 34 & 20 to Philomath	All season
5	3215 to Co Rd 807 to Hwys 34 & 20 to Philomath	All season
6	Split haul: Landings A-C to 3415117 to 3415 to Hwys 34 & 20 to Philomath; landings D-K to 3415 to 3412 to Hwys 34 & 20 to Philomath	All season system roads and temporary road to landing A; dry season all other temporary roads
7	3415 to 3412 to Hwys 34 & 20 to Philomath	All season
8	3415 to 3412 to Hwys 34 & 20 to Philomath	All season
9	3412 to Hwys 34 & 20 to Philomath	Dry Season
10	3412 to Hwys 34 & 20 to Philomath	All season system roads and temporary road to landing Q; dry season all other temporary roads
11	3412 to Hwys 34 & 20 to Philomath	All season system roads except landing F; dry season temporary roads and landing F
12	3310 to 3412 to Hwys 34 & 20 to Philomath	All Season
13	3310120 to 3310 to 3412 to Hwys 34 & 20 to Philomath	Dry Season

* Dry season is June 15 – October 15

E. Additional Timber sale provisions:

All system roads will have a “R” C5.12 restricting haul after rain accumulation exceeds one inch within a 24 hour period.

F. Additional pre-haul maintenance costs appraised for:

Engineering Notes for Missouri Thin TS

- 54 applications, 18 per season of water dust abatement for road 3415. Water truck and operator \$90 per hour at one hour per application = $\$90 \times 54 = \mathbf{\$4,860}$.

Mike Brouwer
Transportation Planner
Siuslaw National Forest